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Standards

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I.S. EN 60317-18:2004

Specifications for particular types of winding wires -- Part 18 : Polyvinyl acetal enamelled rectangular copper wire, class 120 (IEC 60317-18:2004 (EQV))

I.S. EN 60317-18:2004

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60317-18/A1

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English version

**Specifications for particular types of winding wires -
Part 18: Polyvinyl acetal enamelled rectangular copper wire, class 120
(IEC 60317-18:2004/A1:2009)**

Spécifications pour types particuliers
de fils de bobinage -
Partie 18: Fil de section rectangulaire
en cuivre émaillé avec acétal
de polyvinyle, classe 120
(CEI 60317-18:2004/A1:2009)

Technische Lieferbedingungen
für bestimmte Typen von Wickeldrähten -
Teil 18: Flachdrähte aus Kupfer,
lackisoliert mit Polyvinylacetal, Klasse 120
(IEC 60317-18:2004/A1:2009)

This amendment A1 modifies the European Standard EN 60317-18:2004; it was approved by CENELEC on 2010-02-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

I.S. EN 60317-18:2004

EN 60317-18:2004/A1:2010

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Foreword

The text of document 55/1123/CDV, future amendment 1 to IEC 60317-18:2004, prepared by IEC TC 55, Winding wires, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60317-18:2004 on 2010-02-01.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2010-11-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2013-02-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of amendment 1:2009 to the International Standard IEC 60317-18:2004 was approved by CENELEC as an amendment to the European Standard without any modification.

Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

Addition to Annex ZA of EN 60317-18:2004:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60851-4	1996	Methods of test for winding wires - Part 4: Chemical properties	EN 60851-4	1996

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EUROPEAN STANDARD

EN 60317-18

NORME EUROPÉENNE

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English version

Specifications for particular types of winding wires
Part 18 : Polyvinyl acetal enamelled rectangular copper wire, class 120
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This European Standard was approved by CENELEC on 2004-09-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
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EN 60317-18:2004

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Foreword

The text of document 55/909/FDIS, future edition 3 of IEC 60317-18, prepared by IEC TC 55, Winding wires, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60317-18 on 2004-09-01.

This European Standard supersedes EN 60317-18:1995 + A1:1998.

The main changes with respect to EN 60317-18:1995 are as follows:

- new requirements for appearance, Subclause 3.2, added;
- new pin hole test, Clause 23, added.

The following dates were fixed:

- | | | |
|--|-------|------------|
| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2005-06-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2007-09-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60317-18:2004 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE Where an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60317-0-2	- ¹⁾	Specifications for particular types of winding wires Part 0-2: General requirements - Enamelled rectangular copper wire	EN 60317-0-2	1998 ²⁾

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SPECIFICATIONS FOR PARTICULAR TYPES
OF WINDING WIRES –**

**Part 18: Polyvinyl acetal enamelled rectangular copper wire,
class 120**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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This consolidated version of IEC 60317-18 consists of the third edition (2004) [documents 55/909/FDIS and 55/915/RVD] and its amendment 1 (2009) [documents 55/1123/CDV and 55/1151/RVC]. It bears the edition number 3.1.

The technical content is therefore identical to the base edition and its amendment and has been prepared for user convenience. A vertical line in the margin shows where the base publication has been modified by amendment 1. Additions and deletions are displayed in red, with deletions being struck through.

International Standard IEC 60317-18 has been prepared by IEC technical committee 55: Winding wires.

The main changes with respect to the previous edition are listed below:

- new requirements for appearance, Subclause 3.2, added;
- new pin hole test, Clause 23, added.

This International Standard is to be read in conjunction with IEC 60317-0-2.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The “colour inside” logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this publication using a colour printer.

INTRODUCTION

This part of IEC 60317 is one of a series which deals with insulated wires used for windings in electrical equipment. The series has three groups describing

- 1) winding wires – Test methods (IEC 60851);
- 2) specifications for particular types of winding wires (IEC 60317);
- 3) packaging of winding wires (IEC 60264).

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 18: Polyvinyl acetal enamelled rectangular copper wire, class 120

1 Scope

This part of IEC 60317 specifies the requirements of enamelled rectangular copper winding wire of class 120 with a sole coating based on polyvinyl acetal resin, which may be modified providing it retains the chemical identity of the original resin and meets all specified wire requirements.

NOTE A modified resin is a resin that has undergone a chemical change, or contains one or more additives to enhance certain performance or application characteristics.

Class 120 is a thermal class that requires a minimum temperature index of 120 and a heat shock temperature of at least 155 °C.

The temperature in degrees Celsius corresponding to the temperature index is not necessarily that at which it is recommended that the wire be operated and this will depend on many factors, including the type of equipment involved.

The range of nominal conductor dimensions covered by this standard is as follows:

- width: minimum 2,0 mm; maximum 16,0 mm;
- thickness: minimum 0,80 mm; maximum 5,60 mm.

Wires of grade 1 and grade 2 are included in this specification and apply to the complete range of conductors.

The specified combinations of width and thickness as well as the specified ratio width/thickness are given in IEC 60317-0-2.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60317-0-2, *Specifications for particular types of winding wires – Part 0: General requirements – Section 2: Enamelled rectangular copper wire*

IEC 60851-4:1996, *Methods of test for winding wires – Part 4: Chemical properties*

3 Definitions and general notes on methods of test and appearance

3.1 Definitions and general notes on methods of test

For definitions and general notes on methods of test, see Clause 3 of IEC 60317-0-2.

In case of inconsistencies between IEC 60317-0-2 and this standard, IEC 60317-18 shall prevail.

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